534 171 /153 cont./ Araucanos it is considered of post-Columbian origin and to have come from Africa (2).

2. /From p. 160 in the original source./ Nordenskiöld, 1919, pp. 168-169.

In fact, the similarity of the name with the African word marimba and that of the /154/ instrument itself with others existing in Africa are very significant. There seems not to have been any stringed instrument originally in the Amerindian cultures.

The Mbüá also divert themselves, individually, with small flutes of taquara, with five holes on the upper surface and two on the lower one. To the orifices of the upper surface correspond the index finger, the middle one, and the ring finger of the right hand and the index finger and middle one of the left hand; to the lower ones, the thumbs.

534 [322] [824] The characteristic instrument of the Kayová is the mimbý, a kind of whistle-flute, in most cases carved out of arasá rapó (root of araça), rarely of yvyrákatú or some other wood. It is one of the few objects that many Kayová men always carry with them (3).

3. /From p. 160 in the original source./ For a comparison with the Chaco, see Nordenskiöld, 1919, pp. 179-180.

[782] [789] In spite of repeated attempts, I have been unable to find out with any exactness the purpose for which it is intended; they only told me it is to serve to calm down furious spirits and to call on a protector deity when the individual finds himself in a dangerous situation (thunderclaps, etc.).

Another instrument observed by me only among the Kayová is the double musical bow, guyrapá ſ. There are two small crossed bows, one "masculine" and the other one "feminine," played one against the other. The feminine bow is of ysypó kopí ré-ỹ or of [824] katyguá, with a string of pindó bark (but the bark of takuarí pará, fine taquara with spotted bark, may also be used). The masculine

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

doubtful. Apparently sleeping was not entirely restricted to the hammock among the Cayuá, however, as Rengger mentions children reclining on skins of animals.[a] There is some indication that hammocks were reserved for adults. Hammocks were hung all about the interior of the *tapúi*, in each family section, and could be unslung for extra space during the day.

Every aboriginal *tapúi* had its mortar, and probably most had several of these. Mortars were made of hard wood which had been burned and hacked until there was a depression in the end or in the side: both "vertical" and "horizontal" mortars may have been made, although the "vertical" was much more common.[b] Pestles were either simple, smoothed pieces of wood with rounded ends, or might be tapered in the middle to make a better grip and to lighten them. Sometimes the two pounding ends were different as well, one being regularly blunted while the other was flattened laterally, giving the pestle somewhat the appearance of a narrow, thick spatula.

Long troughs for *cāuī'* beer, cut out of logs in much the same manner as a dugout canoe, were usually to be found by each *tapúi*. Some of the present-day troughs are of great size—as much as thirty feet long and a yard or more wide inside—and it may be that formerly, when every house had its own trough (and without metal tools), they were never as large. The smaller troughs are still to be seen and are usually less than half the size of the largest observed.

Pottery vessels were used which were made by the Cayuá women themselves. The use of these vessels, however, may have been somewhat limited in that gourds could be used for many of the same purposes except direct cooking on the fire. The metal vessels of the European have practically replaced aboriginal pottery, although the use of the gourd still widely persists. Gourds were used to carry water, generally in this case being provided with a coarse net and carrying loop of vegetable fiber. Larger gourds (up to 2 feet in diameter) were used for storing *cāuī'*, tiny ones for keeping paint pigments and herbal remedies, and open half-gourds were used for drinking and eating dippers. The shell of the armadillo made a good container for corn and similar substances. Small gourds were sometimes ingeniously cut so that the top could be used as a close-fitting cover, held tight by cords passing through holes in both parts. Pyrographic decoration of gourds is suggested aboriginally.

Admirably woven, round, flat, sieves of hard, rattan-like material were used for straining *cāuī'* beer and in pounding corn, for separating out coarse grains which needed more grinding. Other basket work seems to have been limited to the woman's back basket, *mbunahū'* (or *adjahū*), worn across the

[a] Rengger, 1835, p. 117.

[b] It is possible, however, that the horizontal type of mortar is modern. It is now much used to crush the juice from sugar cane, an operation for which the upright type with smaller basin is ill suited. Sugar cane is, of course, post-contact.

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

America, is still practiced by the women and children. No use of the dark *genipá*, a plant substance also widely used for painting, was observed by the writer, but it may be that this color has a special and extraordinary purpose. No extensive feather work was in evidence, but it is clear that the bright colored feathers, especially of the toucan and parrot, are still used to make colorful little swatches and tassels to decorate wooden crosses (*kurusú* from Spanish *cruz*), *mbarakú*, and wooden whistles. Feathers may also be still used with cotton head bands, armbands, and collars for ceremonial wear; examples of such pieces were observed, though not in use. These feathered paraphernalia, however, are in no wise as spectacular as the feather work that has come to be associated with the aboriginal Tupi of the coast; in fact, they are rather plain.

Of household furnishings, hammocks, carved, small wooden benches, mortars and pestles, and large wooden troughs for *cŭsŭ'* are still made. The wooden benches of the Cayuá at Taquapiri are simple affairs and very plain, and no attempt was made in the benches seen to represent forms from nature. The only decoration, if any, is of simple lines and dots of red paint applied to the two flat sides of the bench. Mortars and pestles have lost none of their utility and are, in fact, universally in use by the Neo-Brazilians of the region, as well as by the Cayuá. They are employed by the Indians primarily for pounding corn, though the "horizontal" mortar is used for smashing sugar cane for its juice. The axe and the machete have so facilitated the manufacture of *cŭsŭ'* troughs that the largest trees in the forest can now be felled and converted into containers for making this beer. The only limitation concerning their size is that the trough must be transportable from the place where the tree grew. There is little question that the present communal *cŭsŭ'* trough at Taquapiri is the largest ever—at least in the minds of those who made it—and they are probably right. The number of such beer troughs is now smaller in relation to the population than formerly, but this is not directly related to any technological factor.

Basketry, men's work, does not appear to have suffered greatly compared with its aboriginal state, although here, as in so many other places, scant information is available. Firefans, women's back carrying baskets with woven tumplines, crude temporary baskets for hand carrying, and trays of many sizes for straining and winnowing are still made, much as ever. Acculturation has possibly resulted in an increase in the number of woven rattan strainers and winnowing trays manufactured. This is because the Cayuá product is now used (for the same purposes) by most of the local Neo-Brazilian settlers.

Musical instruments of the present-day Cayuá include *mbarakú* gourd rattles, *takwapú* (stamping tubes of *taquara*), tiny musical bows, flutes and wooden whistles. It may be that the aboriginal Cayuá did not have such instruments as the musical bow, although white acculturation is not indicated as their source. No guitars or violins of any sort, home-made or bought, were seen

3:Watson E-4,5 (1943) 1952 SM4 Guarani SM4

work to be accomplished but for the individual to do it single-handedly." The efficiency of the modern Cayuá worker in agriculture has but a single important acculturational cause (I. b.), the introduction of metal cutting implements. Particularly important are the machete, the axe, and the hoe, as has been mentioned. Compared with whatever aboriginal substitutes, there can be little question of the much greater efficiency of these metal tools.

In some sense, however, the several factors making for an increase in agriculture were generally influential here; otherwise there might have been no occasion for the individual to increase his agricultural efficiency and productivity. Obviously the relationship is close, and the distinction herewith of a separate item, the efficiency of the worker, must be justified by its later application in the analysis.

II. A. d. "A loss or diminution of certain native industries." The loss of native industries is a common acculturational effect, and there are a number of common causes. The primary cause in the Cayuá instance is (I. e.), the introduction of trade goods. Particularly significant have been trade goods which will substitute adequately for aboriginal handicraft products. Among these, for example, are the iron pots, bottles, and tin cans which have so successfully all but killed the native ceramic industry. Weaving has suffered much with the introduction of machine-made textiles, obtainable at the *bolichos*, and has been handicapped also by the change to clothing styles for which store cloth is more adaptable than aboriginal loomwork.

At the same time, some white trade items, such as (I. b.), metal tools, have had a contrary effect. Knives and machetes particularly have made certain crafts easier, largely crafts where cutting or splitting processes are important. This is evident in the preparation of vegetable fibers for weaving and tying, or the splitting of rattan for baskets and strainers. Such technological improvement, however, has not appreciably counteracted the decline of native industries whose products find ready trade goods substitutes.

By extension, factors which have enhanced trade relations between the Cayuá and the Neo-Brazilians have contributed to the loss or decrease of native industries. Aboriginal handicraft industries have thus been adversely affected by (I. f.) the growth of an external market for male Cayuá labor. Moreover, besides providing one more way in which the Cayuá may obtain trade goods substitutes, the *changa* (II. A. e.) in many cases occupies a great deal of work time. Frequently much of the time remaining after his own agricultural work is completed is used by the Cayuá in *changa* for local whites. The *changa* thus occupies some of the time formerly devoted to handicrafts.

The development of a small market for certain Cayuá products, including craft items, has also influenced the status of Cayuá handicrafts. The effect of a market (I. g.), however, has been to some extent ambivalent. On the one hand, the modern emphasis, in agricultural production, of a surplus which can